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Two articles are presented. The first by Leonard M. Miller, "The Dropout: Schools Search for Clues to his Problems", discussed data discovered by different states on dropouts. In Maryland counselors claim that lack of interest and dislike of school were the main reasons for dropouts. Specifically, they were discouraged over their progress or disliked their teachers or subjects, saw no value in subjects taken and felt excluded from the social life of the school. Dropout data from Utah; Tucson, Arizona; Dade County, Florida; Orange County, California; Los Angeles, California; and Rochester, New York are also discussed. References are included.

The second part, "Information about Dropouts: Terms and Computations" by John F. Putnam, discussed dropouts through the use of formulas. The different areas presented are withdrawal, mobility, holding power of schools, and dropouts.

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THE DROPOUT

- ***Schools search for clues to his problems***

  LEONARD M. MILLER

- ***Information: Terms and computations***

  JOHN F. PUTNAM

Reprint from

SCHOOL LIFE, May 1963

U.S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE

Office of Education

Bennett O. Stalvey

LEONARD M. MILLER

The dropout: Schools search for clues to his problems

This is one of two articles in this issue that emphasize the importance of getting the facts about dropouts. The second, by John F. Putnam, which focuses on definitions and computations, begins on page 10.

PETER IS A POTENTIAL DROPOUT. He is a 10-year-old fifth-grader, apparently has average intelligence, and so far has managed to keep up with his class—at least to the extent that he has been promoted with it every year. But the trouble he has always had with reading is getting progressively worse, and each day it widens the gap between him and the upper half of his class. The good behavior his teachers praised him for when he was younger has begun to look like apathy. This spring, his school says, he will have to be held back when his class passes on.

Many of the well-known signs of impending dropout are there. Peter's profile fits closely the profile of the dropout as State and national averages show it, not only because of what he does in school but because of what his home is like. Both his parents were themselves dropouts and both work long hours at odd jobs that require little more than physical strength. They have hardly any time at home for encouraging or helping their children.

Because Peter's circumstances are so typical of dropouts generally, his school has no difficulty in recognizing the danger he is in—and recognition of danger is usually the first step toward safety. But Peter's school, though no stranger to dropouts, has never been inclined to be analytical about them and as a result is not particularly sensitive to danger signs other than the stereotypes. As surely as Peter will drop out before he completes high school, just as surely his school has potential dropouts it does not yet recognize as such. And as long as the school does not recognize them, it is losing time it could use to help them.

Fortunately, all of the school's time has not yet run out: as long as pupils are only potential dropouts, the school still has an opportunity to discover their plight and find ways to hold them. And for each one the school holds, it reduces, by one, the frightening total of 7½ million who, the Labor Department estimates, will drop out of school between the beginning and the end of this decade.

I begin with Peter—with one child—for the plain reason that the total number of dropouts in this decade will be amassed in no other way than by adding, hour by hour and day by day, one child to another. I begin with Peter as a small antidote for our growing inclination to talk about the dropout problem in the mass, to talk about mass solutions as if mass solutions were possible. We forget too often that each dropout is an individual person and therefore different from all other persons, that he drops out not because of some overwhelming circumstance in our society but because *for him as a person* something has gone wrong. True, that "something" may well be the result of some overwhelming circumstance in our society, but we still live in a world where adults can and are obliged to interpose themselves between a child and danger.

I do not mean to minimize in any way the importance of national and other large studies of the dropout problem, nor the importance of large efforts to find solutions. But most of the concern of government and industry and the Nation as a whole is an economic concern, born out of a desire that this country be strong and great and efficient. The concern of the school, in contrast, is more with the pupil as an individual and with his right to develop his faculties to the highest possible point.

Perhaps the great variability we are beginning to discover in dropouts is what discourages us sometimes from trying to discover what makes a dropout a dropout. But not to try is to abdicate a responsibility. The school is a steward of the treasure this Nation has in its children, and the school must account for its stewardship. It is obliged to be methodical in the matter; and method requires that nothing be guesssed at and that everything be measured and accounted for—insofar as it is humanly possible to measure and account for.

Mr. Miller is specialist in counseling techniques, Office of Education. His experience includes counseling and guidance in the university, the State department of education, and the public schools. He is a member of the Subcommittee on Transition from School to Work, which is part of the Federal Government's Interdepartmental Committee on Children and Youth.

Only by highly objective measuring and accounting for can the schools eventually get to the bottom of their all-too-frequent failure to hold all pupils until the end of the course. The highly individual nature of each potential dropout's problem persistently brings us back to the responsibility of his school. For the problem can be attacked intelligently only in his school, where he is, where he can be observed, and where he can be helped.

Fortunately, a great many schools are feeling their responsibility in this matter, and are exerting themselves to collect as much information as possible about their pupils that might prove germane to their performance in school. For pupils who have already dropped out, they are taking care to record all items of information that could possibly offer a clue to the causes of dropout or to the steps that might be taken to prevent dropouts. They are defining the scope of their problem by keeping new and discriminating accounts of all pupils who enroll and withdraw; and they are searching for meaning in their accounts.

The following paragraphs point out a number of different approaches that State and local school systems are taking to an analysis of their dropout problems. They give examples of the forms and resources that these systems have used in collecting and analyzing information. [The published sources of information used by Mr. Miller are listed at end of article.—Ed.]

State of Maryland

A recent study by the Maryland State Department of Education illustrates the attention that is being given in many places to the characteristics of the dropout. Who is he? What are the conditions in himself and in his environment that might dispose him toward dropping out? The study has turned up some interesting facts that will long be helpful both to the State and to the local schools in their efforts to keep pupils in school until they graduate.

Table 1. Reasons for withdrawal given by pupils who dropped out of Maryland public high schools during the year ending June 30, 1961, by color and sex of dropout

Reason	All dropouts		White dropouts				Negro dropouts				Number not reported by sex or color
			Male		Female		Male		Female		
	Number	Percent of total [1]	Number	Percent of total [1]	Number	Percent of total [1]	Number	Percent of total [1]	Number	Percent of total [1]	
Lack of interest	4,792	35.3	2,184	41.3	1,216	30.4	719	38.9	400	23.1	273
Lack of scholastic success	2,386	17.8	1,190	22.5	514	12.9	388	21.0	201	11.6	93
Cost of going to school and other economic reasons	1,494	11.1	464	8.8	391	9.8	277	15.0	292	16.9	68
Marriage	1,243	9.2	59	1.1	1,074	26.9	7	.4	75	4.3	28
Pregnancy	715	5.3	.....	.....	170	4.2	.....	.....	512	29.5	33
Committed to institution	605	4.5	174	3.3	97	2.4	193	10.4	92	5.3	49
Military service	549	4.1	447	8.5	.....	.....	90	4.9	.....	.....	12
Poor health	426	3.1	104	2.0	178	4.5	12	.7	81	4.7	51
Parental indifference	340	2.5	159	3.0	137	3.4	20	1.1	14	.8	10
Misbehavior	312	2.3	202	3.8	37	.9	51	2.8	5	.3	17
Emotionally disturbed	289	2.1	126	2.4	98	2.5	24	1.3	33	1.9	8
Lack of suitable program	196	1.4	123	2.3	44	1.1	4	.2	12	.7	13
Socially maladjusted	181	1.3	51	1.0	39	1.0	61	3.3	16	.9	14
Not stated	186	.....	53	.....	36	.....	44	.....	4(	.....	13
Total	13,715	100.0	5,337	100.0	4,031	100.0	1,890	100.0	1,773	100.0	682

[1] The base on which the percentage is computed includes only the dropouts who gave reasons for withdrawal. It excludes "Not stated."

Counselors in the State's 24 local school systems gathered data from a representative sample of the 13,715 pupils who dropped out of school during the year ending June 30, 1961. The sample was selected in such a way that it could be used to analyze dropouts not only for the State as a whole but by the size of school district; and, since it included pupils who dropped out in each of the 12 months, it provided information useful also in analyzing the summer dropout problem. Each principal was asked to make a special effort with his staff to account for all pupils who had not returned to school in September.

The counselors determined the principal reason behind each dropout in the sample, found that lack of interest outweighed every other reason, for both boys and girls, for both the white and the Negro (table 1). Other schools that have studied their dropouts' reasons have discovered something similar, though some have called it by other names, such as "dislike of school." Both "lack of interest" and "dislike of school" no doubt mean different things to the different pupils using them, but counselors generally consider that pupils use either term to cover one or more of several more specific reasons, such as being discouraged over their progress, disliking a certain teacher or subject, seeing no practical value in the subjects they are taking, or feeling ex-

cluded from the social life of the school.

(The items listed in the foregoing table are among the ones usually listed in the reporting forms that State and local school systems have developed in their efforts to arrive at reliable conclusions about the causes of dropout. School systems planning to collect and code such information will be interested in the list of reasons reported in Dr. Putnam's article, beginning on page 10; this is the list drawn up by the national cooperative project, sponsored by the Office of Education, on accounting for pupils.)

In their search for characteristics of dropouts, Maryland schools gathered data on these items (each item is accompanied here by one or two of the outstanding findings):

Age: 72 percent, either 16 or 17 years.
With whom living: 91 percent, with parents or with parent and step-parent.
Status of parents: 72 percent, parents living together.
Source of family income: 52 percent, the father; 13 percent, the mother; 27 percent, both.
Occupation of head of household: 46 percent, unskilled; 41 percent, skilled, or in selling or service occupations; 6 percent, owner or manager of a business or member of a profession.
Education of the father: At least 63 percent, no more than 9th grade.
Education of the mother: 57 percent, no more than 9th grade.
Hours per week the pupil had been employed: 71 percent, none.
Previous suspension: 76 percent, none.
Participation in athletics: 70 percent, none.
Other extraclass activities: 69 percent, none.
Grade in school: 12 percent, grade 8; 19 percent, grade 9; 27 percent, grade 10; 22 percent, grade 11; and 12 percent, grade 12.
Courses: 46 percent, general course; 19 percent, commercial.
Attendance: 60 percent, irregular in preceding year; 72 percent, irregular in current year.
Mental ability: 50 percent, below average.
Achievement in terms of ability: 56 percent, less than normal.
Reading grade level: 10 percent, below 3d grade; 36 percent, 3d to 6th.
Failures during last marking period: 47 percent, 3 or more; 14 percent, 2; 12 percent, 1.
Retentions: 64 percent, none in elementary school; 60 percent, none in junior high.
Conferences about withdrawal: 49 percent, with counselors; 18 percent, with administrators; 21 percent, none.
Contact between school and parent: 80 percent, yes.

Table 2. Dropout and graduation rates in Tucson public high schools, 1960–61, and socioeconomic data on city population, by groups of Census tracts, 1960

Census tracts by groups [1]	Census data					High school data	
	Total population (240,473)	Median years of school	Median income	Percent of housing deteriorating or dilapidated	Percent of adults separated or divorced	Percent of students enrolled who dropped out	Percent of students who graduated from high school [2]
I	28,195	8.4	$3,669	43.2	8.1	17.1	37
II	44,052	10.2	4,726	24.3	5.0	10.5	58
III	39,996	11.8	5,308	10.1	4.6	10.4	75
IV	47,863	12.3	5,873	2.5	3.6	7.0	70
V	80,367	12.6	6,804	6.2	4.2	3.7	90

[1] For convenience in analyzing data, Tucson divided the 45 census tracts in the city into 5 major groups on the basis of proximity of the tracts and degree of similarity in the population in income, educational achievement, and housing conditions.
[2] Based on number who entered high school 4 years earlier.

Source: Census data are from "U.S. Census of Population and Housing, 1960: Final Report PHC (1)–161, Tucson, Arizona, Standard Metropolitan Statistical Area." School data are from the records of the Tucson public school districts.

Utah

Utah has made a similar analysis of its dropouts. The report compiled in 1962 by the Department of Public Instruction on a study of the characteristics of 616 dropouts in the State includes some items not usually included in such studies; for example—

Number of student-initiated interviews with the counselor?

171 dropouts, none
94, one
97, two
87, three
44, four
17, five
69, six or more
37, no report

Automobile ownership?

127 own or are paying for a car
201 do not own but use another's
275 do not use
13, no report

Parents' opinion about pupil's dropping out?

102, definitely against
167, moderately against
144, passive
113, moderately in favor
49, definitely in favor
41, no report

Tucson, Arizona

Tucson has used the Census Bureau's data on the social and economic conditions of the city's population in its study of the causes of students' dropping out of school. Tucson officials have compared the graduation and dropout rates in the public high school in school year 1960–61 with the socioeconomic conditions in the city's 45 census tracts. The comparison reveals a significant relationship between the dropout and his community—between the dropout and the education, income, and marital status of the people around him (table 2).

Dade County, Fla.

The public schools of Dade County, Fla., are approaching the end of a 3-year longitudinal study of dropouts. They began on "Census Day," September 20, 1960, when they took a 20-percent random sample from each of two groups of pupils—their 7th-graders and their 10th-graders.

The 7th-grade sample, taken from the 37 schools that had this grade in the fall of 1960—3 elementary schools, 29 junior high schools, and 5 junior-senior high schools—began

with 2,790 pupils. The 10th-grade sample, from 12 senior high schools and 5 junior-senior high schools, began with 2,031. The study will follow these pupils for 3 years, which will bring the 7th-graders through grade 9 and the 10th-graders through grade 12. Put together, the samples span the 6-year period which ends with graduation from high school and will provide a basis for analyzing the whole dropout problem. Detailed information on each dropout is being recorded on an "exit interview data sheet."

By including data on all withdrawals in these samples, including both dropouts and pupils transferring to other schools, the study will yield information also on the mobility of the pupil population.

Orange County, Calif.

The schools in Orange County, Calif., have good reason to be concerned about the problems associated with population mobility, for Orange County is one of the fastest growing counties in the United States. Between 1950 and 1960 its population increased by more than 488,000. In 1960, when the Federal census was taken, Orange County had a population of 710,000; a few months later, in December 1961, it had an estimated 800,000. By 1980, a projection shows, it will have 2 million people.

In each of the past 8 years, school enrollment has increased by an average of 20,000 pupils. In 1953–54 Orange County had 57,619 pupils from kindergarten through grade 14; now it has 219,000.

With all these changes, the schools have felt a particular need to get acquainted with the circumstances in which their pupils live. They recently made a survey of 3,309 Orange County children and concluded from their sample that 15 percent of all children between 5 and 17 years of age are living in broken homes; that there are approximately 6,000 boys "without father guidance"; that the highest percentages of fatherless boys are in grades 6, 7, and 8.

Having noted from many reports from other studies that children from broken homes are more prone than others to drop out of school, Orange County teachers and counselors are particularly sensitive to signs that these children are becoming potential dropouts. They are using their knowledge of their pupils' background in efforts to keep them in school.

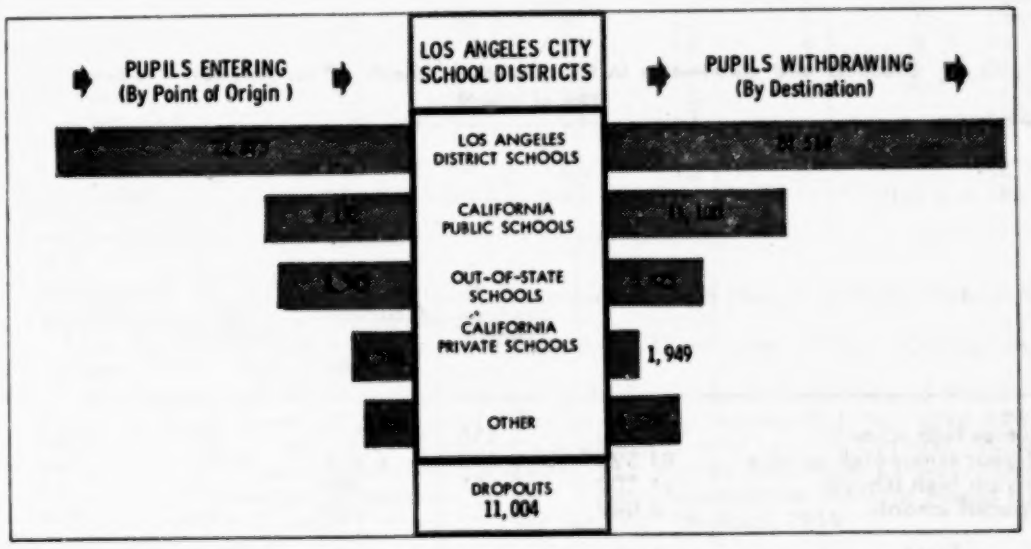
Many other schools are feeling the effects of our constantly shifting population. The Census Bureau reports that between March 1, 1960, and March 1, 1961, more than 35 million persons in the country moved at least once. At least some schools are prepared to handle the changes the moves call for. Their procedures are ready to record students' changes of residence, the destinations of students who transfer out, the origins of those who enter, and the education and the ethnic and socioeconomic background of students' parents. And their teachers and counselors have been alerted to demands that will be made upon them. But there are other schools, unprepared to welcome and to serve the students who come in or to guide those who go out.

Los Angeles

The data-collection system of the Los Angeles City School Districts also reflects an awareness of the effect that population mobility has on a school's program.

Each school keeps a special kind of record on its entries and withdrawals. The pupil who enters during the regular school term is accounted for in a "record of entrance"; the pupil who departs, in a "record of transfer.". And if a pupil checks out of school during the summer months or fails to enroll as expected in September, he is accounted for in a "record of summer transfers and September nonenrollees." (In Los Angeles schools, "transfer" is a generic term which covers all pupils leaving school for any reason; it includes dropouts.)

In these records Los Angeles notes the destinations of all pupils leaving its schools, and the points of origin of all pupils entering. The chart on



Number of pupils entering the Los Angeles City School Districts, by point of origin; number transferring, by destination; and number dropping out: 1960–61

Table 3. Estimated dropout rate for secondary schools (grades 7–12) in Los Angeles, based on total enrollments and dropouts in each grade, June 1960 to June 1961

Grade	Enrollment, November 1960	Dropouts, June 1960 to June 1961	Dropouts as percentage of enrollment	Estimated number remaining at completion of grade for every 1,000 entering grade 7
7th	40,503	166	0.4	996
8th	37,499	299	.8	988
9th	36,261	691	1.9	969
10th	33,149	3,810	11.5	858
11th	28,720	3,431	11.9	756
12th	24,770	2,371	9.6	683
Total	[1] 200,902	[2] 10,768	5.4	.....

[1] Does not include 5,027 ungraded pupils.
[2] Does not include 236 ungraded dropouts.

page 5 illustrates the analysis such records make possible: in 1960–61 the excess of transfers out over entrants is accounted for almost entirely by dropouts.

The city has computed its dropout rate in the secondary schools—grades 7 to 12—by a computation using the enrollments and dropouts in each of the 6 grades during a single 12-month period. The computation unfolds in table 3, which shows how, on the basis of 1 year's figures, Los Angeles estimates that out of every 1,000 entering grade B–7, as many as 683 stay to graduate from the senior high school—that, in other words, its dropout rate over the 6-year period is 31.7 percent. It is interesting to see that, although the holding power of the secondary schools is computed not for one actual class as it passes through the 6 grades but for all 6 grades during a single year, the estimate of the size of the graduating class compares closely with the retention rate computed by the Office of Education for a class passing through grades 5–12 in the years 1954–55 to 1961–62, which shows that for every 1,000 fifth-graders in 1954–55, 636 stayed to graduate (see *Statistic of the Month*, p. 9 ; for a table showing the holding power of public high schools in each State, see p. .8 this issue).

In analyzing the circumstances that might have a bearing on its dropout problem, Los Angeles has regrouped its figures on dropouts and enrollments by the type of school (table 4). This kind of analysis, as the records accumulate year after year, makes possible many kinds of comparisons that may point to factors in the dropout problem. A comparison, for example, of the percentages of dropouts in the different types of secondary schools in 1960–61 and in the year preceding (in 1959–60 the percentages that correspond to those in the final column of table 3 were as follows: junior high schools, 1.1 percent; 3-year senior high schools, 10.5 percent; 6-year high schools, 5.2 percent; and special schools, 24.8 percent) shows that though the ratio of dropout to enrollment had decreased in the junior high and special schools it had increased in both types of senior high schools. There may be no significance in this particular comparison, but it helps to illustrate my point, that there are important facts about the dropout problem which we have not yet uncovered and the only way to get at them is to keep constantly on the lookout for clues and correlations.

Table 4. Dropouts and enrollments in the secondary schools of Los Angeles, 1960–61, by type of school

	Enrollments [1]	Dropouts			
		Number			Percent of enrollment
		Summer 1960	Academic year 1960–61	Total 1960–61	
Junior high schools	111,493	358	535	893	0.8
3-year senior high schools	81,525	2,329	6,698	9,027	11.1
6-year high schools	11,803	161	469	630	5.3
Special schools	2,082	65	389	454	21.8
Total	206,903	2,193	8,091	11,004	5.3

[1] Mean of the enrollments in the second months of the semesters.

Illinois

In Illinois a study of the dropout population has resulted in the development of programs for schools to use in identifying and holding dropouts.

The study, which the State department of education initiated in 1960, reached back to cover persons who should have graduated from high school in 1959 but who for one reason or another had left school before graduation day. The population selected for study was 11,266 persons

who in 1955 were actually enrolled in the high schools included in the study. The 83 districts participating in the study include approximately 15 percent of all Illinois districts operating a high school, and account for approximately 15 percent of all the public high school students in the State.

As the findings showed, 2,723, or 24.3 percent, of the persons had dropped out before graduation. This percentage is lower than the estimated dropout rate for Illinois, probably because the study did not count those persons who had dropped out before high school.

The findings fall into two major categories.

The first includes data on factors which seem to predispose children to dropping out of school. Findings here show three factors to be particularly influential: A low academic aptitude, a slow rate of emotional and social development, and lack of parental interest in education.

The second includes data on the kind of response the dropouts made to school. This response was measured by the marks they earned, the extraclass activities they had participated in, and the relationships they had with teachers and with other pupils. In almost all of these, the dropouts ranked low.

As a result of the interest aroused throughout the State by the findings in the study, the State department of education has worked out procedures and devised instruments for the schools to use in identifying the potential dropout. The bulletin it has prepared contains reproductions of personal-data summary sheets and suggested models for research studies to be carried out in both large and small schools—elementary, junior high, and senior high schools. The bulletin also includes suggestions on the selection of staff, inservice training, and equipment, materials, and facilities.

Rochester, N.Y.

The school system in Rochester, N.Y., having made a study of its own dropouts, has proceeded to the next logical step—to look beyond itself and measure its own problem against that of others. In making this kind of comparison, more than one school system has been enlightened as to the causes of its own problem; it may, for example, have found differences between itself and others that have been clues to some unusual factor in its own situation.

Just as comparisons make more sense when they are made between school systems in fairly similar circumstances, so comparisons make more sense when they are based on terms that mean the same things in all the school systems being compared. Lack of uniformity throughout the Nation in the terminology used in studying and discussing the dropout problem has no doubt retarded our progress in finding solutions to it. Now, however, a cooperative national effort has produced not only a definition of dropout that is gaining widespread support but definitions of a great many other terms related to information about pupils—I refer the reader again to Dr. Putnam's article on page *10*—and the future for research on the dropout problems and for the exchange of significant information about it looks bright.

Rochester, in comparing its data on the ages of dropouts with the data in six other studies found, for example, that its own dropouts were, on the whole, older than the others (table 5). This fact probably has no meaning for the Nation as a whole, but to Rochester it may be a highly significant point of contrast.

Table 5. Rochester dropouts in 1960–61 compared, on the basis of age at time of dropout, with dropouts in 6 selected studies

Study	Age at time of dropout						Mean age at dropout
	15 years and under	16 years	17 years	18 years	19 years	20 years and over	
	Percent	Percent	Percent	Percent	Percent	Percent	Years
Rochester	1	33	41	19	5	1	17.48
Syracuse [1]	6	43	29	16	4	2	16.70
Tacoma [2]	13	30	32	17	4	5	17.01
7 communities [3]	11	34	27	16	5	7	16.88
Connecticut [4]	6	53	28	[5] 13	.....	.....	16.46
Early school leavers [6]	10	54	26	[5] 10	.....	.....	16.38
California [7]	16	58	20	([8])	([8])	([8])	16.04

[1] Syracuse Youth Development Center in conjunction with New York State Division for Youth Syracuse Dropout (unpublished).
[2] Tacoma-Pierce County Study of Education, "These Left Before Graduation." Tacoma, Wash., May 1958.
[3] U.S. Department of Labor, "Schools and Early Employment Experience of Youth—a Report on Seven Communities, 1952–57," Bureau of Labor Statistics Bul. No. 1227–1960. Washington, D.C., 1960. (The 7 communities include 1 each in New England, Middle Atlantic, South Atlantic, and Mountain regions, and 3 in the East North Central region.)
[4] State of Connecticut, Commission on Civil Rights, "Comparative Study of Negro and White Dropouts in Selected Connecticut High Schools," Hartford, 1959.
[5] 18 years and over.
[6] Harold J. Dillon, "Early School Leavers," National Child Labor Committee, New York, 1949.
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The number of ninth graders in 1958–59 compared with the number of high school graduates 4 years later, public schools, by State [1]

State	Ninth graders, 1958–59	High school graduates, 1961–62	Percent graduating
Total U.S. (50 States)	2,415,309	1,682,609	69.7
Alabama	51,860	30,455	58.7
Alaska	2,266	1,424	62.8
Arizona	19,009	12,499	65.8
Arkansas	30,576	19,328	63.2
California	[2] 201,721	166,500	82.5
Colorado	24,581	17,367	70.7
Connecticut	[2] 29,944	21,941	73.3
Delaware	5,630	4,026	71.5
Florida	66,039	42,882	64.9
Georgia	63,458	36,014	56.8
Hawaii	9,418	7,793	82.7
Idaho	11,851	8,722	73.6
Illinois	118,189	82,739	70.0
Indiana	67,575	46,825	69.3
Iowa	38,030	30,081	79.1
Kansas	31,398	[3] 24,715	78.7
Kentucky	41,524	23,759	57.2
Louisiana	48,004	28,492	59.4
Maine	12,966	8,655	66.8
Maryland	40,190	26,438	65.8
Massachusetts	[2] 62,719	45,826	73.1
Michigan	96,147	75,323	78.3
Minnesota	47,977	38,340	79.9
Mississippi	36,474	22,094	60.6
Missouri	55,921	[3] 40,174	71.8
Montana	10,115	7,413	73.3
Nebraska	18,619	14,469	77.7
Nevada	4,173	2,638	63.2
New Hampshire	7,282	4,896	67.2
New Jersey	72,210	50,977	70.6
New Mexico	15,205	8,971	59.0
New York	195,278	131,741	67.5
North Carolina	81,342	48,068	59.1
North Dakota	9,782	7,604	77.7
Ohio	122,055	86,681	71.0
Oklahoma	39,347	27,052	68.8
Oregon	26,780	20,127	75.2
Pennsylvania	140,151	103,037	73.5
Rhode Island	[4] 9,010	6,448	71.6
South Carolina	39,878	23,929	60.0
South Dakota	10,141	8,186	80.7
Tennessee	57,164	33,701	59.0
Texas	137,872	86,518	62.8
Utah	15,674	12,130	77.4
Vermont	4,810	3,315	68.9
Virginia	54,843	34,232	62.4
Washington	41,525	33,293	80.0
West Virginia	32,587	19,527	59.9
Wisconsin [5]	[2] 50,741	41,401	81.6
Wyoming	5,258	3,913	74.4

[1] This table was compiled by the Office of Education. The first 2 columns of figures are not completely comparable, owing to interstate migrations and transfers to or from nonpublic schools. [2] Enrollment not cumulative, but as of a specific date. [3] Estimated by the State. [4] Partly estimated by the Office of Education. [5] Excludes vocational schools not operated as part of the regular school system.

Statistic of the Month

Holding power of U.S. schools rises *

Children are staying in school longer than ever before. As the table and chart show, the retention rate from the fifth grade through high school graduation has more than doubled in the past 30 years. The improvement is even greater between the fifth grade and the first year in college: about 34 percent of our former fifth graders now go on to college, compared to only 12 percent 30 years ago.

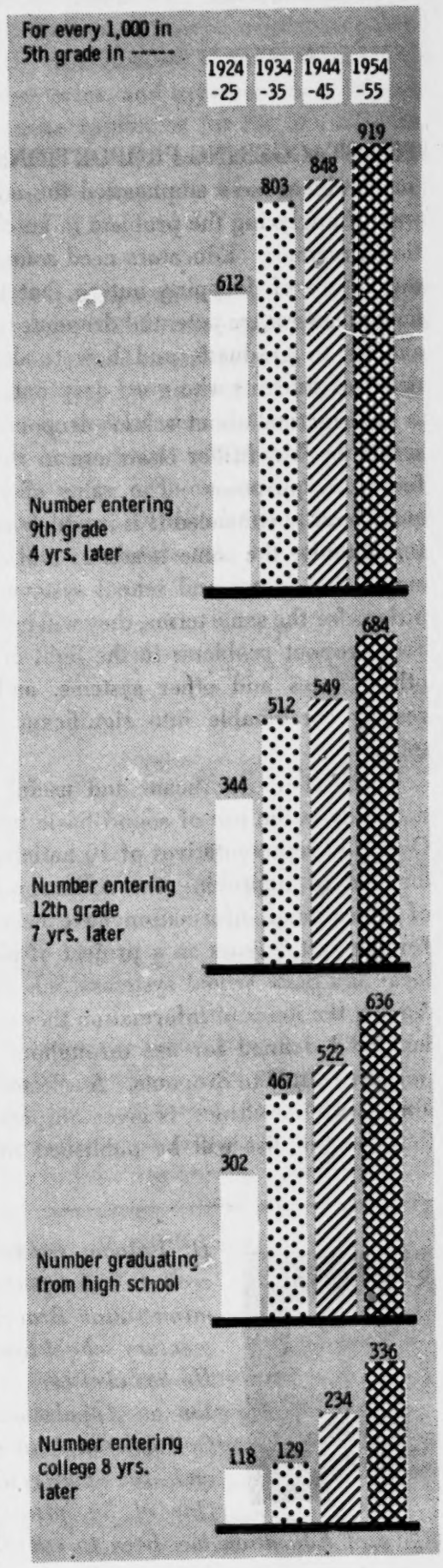
The Office of Education bases its retention tables on fifth-grade rather than first-grade enrollment because of the high rate of retardation in the early grades. Besides, compulsory attendance laws keep virtually all children in school at least until the fifth grade. The figures are based on enrollments in public elementary and secondary schools and include estimates for nonpublic schools. Rates for college enrollment include all students, both part-time and full-time, in degree-credit programs.—W. Vance Grant, educational statistician.

Estimated retention rate in U.S. schools (48 States and D. C.), public and nonpublic, from fifth grade through college entrance, 1924–32 to 1954–62

School year in which pupils entered 5th grade [1]	For every 1,000 pupils entering 5th grade in a specified year, this number—				
	Entered 6th grade 1 year later	Entered 7th grade 2 years later	Entered 8th grade 3 years later	Entered 9th grade 4 years later	Entered 10th grade 5 years later
1924–25	911	798	741	612	470
1926–27	919	824	754	677	552
1928–29	939	847	805	736	624
1930–31	943	872	824	770	652
1932–33	935	889	831	786	664
1934–35	953	892	842	803	711
1936–37	954	895	849	839	704
1938–39	955	908	853	796	655
1940–41	968	910	836	781	697
1942–43	954	909	847	807	713
1944–45	952	929	858	848	748
1946–47	954	945	919	872	775
1948–49	984	956	929	863	795
1950–51	981	968	921	886	809
1952–53	974	965	936	904	835
1954–55	980	979	948	919	855

School year in which pupils entered 5th grade [1]	Entered 11th grade 6 years later	Entered 12th grade 7 years later	Graduated from high school 7 years later (i.e., in the year shown)	Entered college 8 years later
1924–25	384	344	302 (in 1932)	118
1926–27	453	400	333 (in 1934)	129
1928–29	498	432	378 (in 1936)	137
1930–31	529	463	417 (in 1938)	148
1932–33	570	510	455 (in 1940)	160
1934–35	610	512	467 (n 1942)	129
1936–37	554	425	393 (in 1944)	121
1938–39	532	444	419 (in 1946)	[2]
1940–41	566	507	481 (in 1948)	[2]
1942–43	604	539	505 (in 1950)	205
1944–45	650	549	522 (in 1952)	234
1946–47	641	583	553 (in 1954)	283
1948–49	706	619	581 (in 1956)	301
1950–51	709	632	582 (in 1958)	308
1952–53	746	667	621 (in 1960)	[3] 328
1954–55	[3] 764	[3] 684	[3] 636 (in 1962)	[3] 336

[1] Fifth grade in 12-grade systems; 4th grade in 11-grade systems. [2] Lack of detailed information about students who were veterans prevents reliable calculation. [3] Subject to slight revision when final data become available.



JOHN F. PUTNAM

Information about dropouts: terms and computations

THE STAGGERING PROPORTIONS of the school dropout problem have emphasized the educator's need for a way of analyzing the problem in an objective and unemotional manner. Educators need sound information about the nature of dropping out so that they can learn both how to encourage potential dropouts to stay in school long enough to graduate, and how to determine the special needs of students who *must* drop out.

Information about school dropouts, such as that presented by Mr. Miller elsewhere in this issue, is valuable for many purposes. The value of such information is considerably enhanced if it is widely collected in the same form, under the same headings and definitions. To the extent that States and school systems use the same definitions for the same terms, they will be able to analyze their own dropout problems in the light of the experiences of other States and other systems, and the data will be readily combinable into significant State and national totals.

Essential to significant and useful information about dropouts is the use of sound basic items of information. Over 250 representatives of 10 national organizations interested in improving the collection and dissemination of educational information have been working together for the past 3 years on a project of pupil accounting for local and State school systems (*School Life*, Feb. 1962). Among the items of information they have selected, classified, and defined for use throughout the country are a number related to dropouts. A selected list of these items, along with definitions, is given on page 14. it is expected that the full list will be published in a handbook next winter. Items of this sort, when widely accepted, and when regularly collected as a matter of routine, should be the basis for computations of data on school dropouts.

THE COMPUTATIONS presented below are for illustration only and are not to be considered as necessary for all schools to make. Nor should they be considered as the only computations that need to be made. Indeed, calculations specifically about dropouts are of rather recent origin, and none have the authority of long and useful practice. The calculations which follow, therefore, have been selected because they, of all the many and various calculations that could be or have been made, seem the most promising from the standpoint of usefulness and soundness. Not all will be included in the project handbook, but all are based on items listed in the handbook.

Certain school systems or States may feel that a single computation—for example, the computation yielding the number of dropouts per 1,000 pupils in average daily membership—is adequate for their purposes. Other systems or States may feel that several, or even most, of the computations presented on these pages, as well as other computations, are needed to provide the information they want.

No matter how it is used, each term or heading for a computation should be based on one definition, in order to minimize misinterpretation and misuse of information. And if a school system wishes to use an approximately similar but nonetheless different computation, it should devise a new or distinctive term or heading for the result of the computation; assignment of a term already in use would lead only to confusion and misunderstanding. Moreover, all statements about dropping out should indicate what group of pupils and what period of time they cover; that is, they should indicate the grade or grades of the group during the first regular school term [1] included in the computation and the number of consecutive regular school terms.

For the sake of convenience, the computations that follow are grouped under four major headings: Withdrawal, mobility, holding power, and dropouts. The dia-

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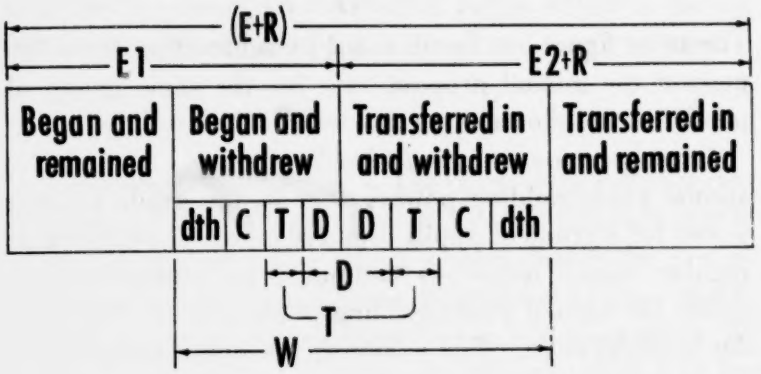
[1] The regular school term is the term which usually begins in the fall or late summer and ends in the spring; it may be interrupted by one or more vacations.

gram below, with its key to symbols, should be helpful in preparing the reader for the computations: it represents the number of pupils entering and withdrawing from a school or school system during a regular school term.



(*E*+*R*)=number of different pupils entering the school or school system during the regular school term.

*E*1 =number of pupils whose entry into the school or school system was their original one in the United States during the regular school term.

*E*2+*R*=number of pupils transferring into the school or school system during the regular school term: For the E2's the entry was their original one in this State during the regular school term; for the R's it was not.

W =number of pupils who withdrew.

D =number of pupils who dropped out.

T =number of pupils who transferred out to other schools or school systems.

C =number of pupils who completed secondary school (grade 12) or equivalent programs.

dth =number of pupils who died.

The formulas that follow may be applied to the elementary and secondary schools of any State. For an entire State, the number of different pupils entering—represented by $(E+R)$ in the diagram above—is the sum of the original entries ($E1$ and $E2$) for all the schools of the State. In calculations for a local school system, the original entries should be augmented by the reentries *R*3, *R*4, *R*5, *and R*7 (for definitions, see page *14*). In calculations for an individual school, the original entries should be augmented by *R*2 as well.

Withdrawal

Rates of withdrawal indicate the frequency with which pupils withdraw from a school or school system.

Annual rate. The annual withdrawal rate is the total number of times pupils withdraw from a given school or system during the regular term, divided by the number of different pupils entering during the term, and expressed as a percentage:

$$\text{Annual withdrawal rate}=\frac{D+T+C+dth}{(E+R)}\times 100$$

Cumulative rate. The cumulative withdrawal rate is the number of different pupils who entered a school or school system during the first of a series of regular school terms, divided into the total number of times *these* pupils withdrew during these terms, and expressed as a percentage. The same formula applies as for the annual withdrawal rate, but the *E*'s and *R*'s are limited to the first regular school term and, for the pupils who entered during the first term, the *D's, T's, C's,* and *dth's* accumulate over all the terms in the series.

Number and percentage of pupils withdrawing, by type of withdrawal. An analysis of the manner in which pupils withdraw from a given school or school system may be made by considering, first, the *number* of pupils withdrawing during a given regular school term in each of of the four principal categories of withdrawal—transfer, completion of school work, dropout, and death—and, second, the *percentage* of pupils withdrawing in each of these categories. The percentages may be computed as follows:

$$\text{Percentage of pupils withdrawing by transferring}=\frac{T}{W}\times 100=\frac{T}{D+T+C+dth}\times 100$$

$$\text{Percentage of pupils withdrawing by completing school work}=\frac{C}{W}\times 100=\frac{C}{D+T+C+dth}\times 100$$

$$\text{Percentage of pupils withdrawing by dropping out}=\frac{D}{W}\times 100=\frac{D}{D+T+C+dth}\times 100$$

$$\text{Percentage of pupils withdrawing through death}=\frac{dth}{W}\times 100=\frac{dth}{D+T+C+dth}\times 100$$

Another method of computing withdrawal percentages is to divide the number of pupils in each category by the number of different pupils entering during the term $(E+R)$ and to express the result as a percentage. These percentages may be called, respectively, percentage of pupils transferring, percentage of pupils completing school work, percentage of pupils dropping out, and percentage of pupils who died.

Mobility

The following indicators of mobility may help to explain the dropout rate. If the numbers of pupils transferring in and out are exceptionally large, they may indicate, for example, a need to study the effectiveness of the instructional and guidance programs for these pupils.

Intransfers per 1,000 pupils in ADM. Intransfers per

1,000 pupils in average daily membership (ADM)[2] *in* a given school or school system is the sum of the *times* pupils transfer into these schools during a regular school term, divided by the *ADM* during that term, and multiplied by 1,000 (in this computation *R* always includes *R*2, *R*3, *R*4, *R*5, and *R*7):

$$\text{Intransfers per 1,000 pupils in } ADM = \frac{E2+R}{ADM} \times 1{,}000$$

The rate of intransfer can also be expressed as the *percentage transferring in.* The number of times pupils transfer in during a regular school term is divided by the number of different pupils entering, and the result is expressed as a percentage.

Out-transfers per 1,000 pupils in ADM. The number of pupils transferring out per 1,000 in *ADM* is the sum of the times pupils transfer out of a given school or school system during a regular school term, divided by the ADM during that term, and multiplied by 1,000 (in this computation *T* always includes *T*2, *T*3, and *T*4):

$$\text{Out-transfers per 1,000 pupils in } ADM = \frac{T}{ADM} \times 1{,}000$$

Or, the out-transfer rate can be expressed as the *percentage transferring out.* The number of times pupils transfer out during a regular term is divided by the number of different pupils entering, and the result is expressed as a percentage.

Median length of membership in final school. The median length of membership in final school for pupils who drop out is that length which is longer than the length for 50 percent of the dropouts and shorter than the length for the other 50 percent. The length of membership is expressed to the nearest whole month and includes only the membership during the regular school terms.

Holding power

The holding power of a school or school system over a given period of time is indicated by the proportion of its pupils who do not drop out during that time. Pupils who transfer out are considered as remaining in an educational program.

Annual grade holding power. Annual grade holding power is computed by subtracting, from the total number of different pupils entering a given grade in a given school or school system during a given regular school term, the number of pupils dropping out since the end of the preceding regular term, dividing the remainder by the number of pupils entering, and expressing the quotient as a percentage:

$$\text{Annual } GHP = \frac{(E+R)-\text{D}}{(E+R)} \times 100$$

The same figure can be obtained by subtracting from 100 percent the annual dropout rate for the same group of pupils during the same term.

Cumulative annual grade holding power. Cumulative annual grade holding power—that is, the grade holding power for a group of pupils over a sequence of two or more regular school terms—is computed by multiplying together the annual grade holding power for the terms under consideration. For example, the cumulative annual grade holding power for a group of pupils passing through grades 10–12 during 1961–63 in a given school or school system is computed as follows:

$$\text{Cumulative annual } GHP_{\substack{10\text{-}12\\1961\text{-}63}} = GHP_{\substack{10\\1961}} \times GHP_{\substack{11\\1962}} \times GHP_{\substack{12\\1963}}$$

Cumulative holding power. Cumulative holding power is computed by subtracting, from the total number of different pupils who entered a given grade in a school or school system during the first of a series of regular school terms, the number of *these pupils* who drop out during *these terms*, dividing the remainder by the number of different pupils who entered during the first term, and expressing the result as a percentage. The computation uses the same formula as the one for annual grade holding power except that the *E*'s and *R*'s are limited to the ones in the first term and the *D*'s accumulate during the series of terms *for those pupils who entered during the first term.*

Projected grade holding power. Projected grade holding power is indicated by the percentage of pupils entering a given grade of a school or school system during a given regular school term who, if the current rate of grade holding power were to continue, would either remain in this school or school system to the end of some subsequent term or would transfer to some other school or school system. The percentage is computed by multiplying together the current grade holding power of all grades the pupils will be in during the time for which the projection is being made. For example, the projected grade holding power for a group of pupils passing through grades 10–12 during 1963–65 is computed as follows:

$$\text{Projected } GHP_{\substack{10\text{-}12\\1963\text{-}65}} = GHP_{\substack{10\\1963}} \times GHP_{\substack{11\\1963}} \times GHP_{\substack{12\\1963}}$$

Dropouts

Some of the computations in this section produce dropout rates; others provide a basis for an analysis of the

[2] The average daily membership of a school during a given regular school term is found by adding the days present and absent for all pupils and dividing the sum by the number of days school was actually in session. For groups of schools having different lengths of term, the total *ADM* is the sum of the *ADM*'s of the individual schools.

factors in a high or low incidence of dropping out. Pupils dropping out during the summer are included in the figures for the subsequent regular school term.

Annual dropout rate. The annual dropout rate is computed by dividing the number of pupils dropping out of a given school or school system in a given regular school term by the number of different pupils entering during the term, and expressing the result as a percentage:

$$\text{Annual dropout rate} = \frac{D}{(E+R)} \times 100$$

Cumulative dropout rate.—The cumulative dropout rate is computed by dividing, by the number of different pupils who entered a school or school system during the first of a series of regular school terms, the number of *these pupils* who dropped out during these terms, and expressing the result as a percentage. The same formula applies as for the annual dropout rate, but the *E*'s and *R*'s are limited to the ones in the first term and the *D*'s are accumulated throughout the series of terms for *those pupils who entered during the first term.*

Projected grade dropout rate. The projected grade dropout rate indicates the proportion or percentage of pupils entering a given grade of a given school or school system during a given regular school term who would drop out of this school or school system before the end of some specific subsequent term if the existing rates of grade holding power were to prevail. The projected grade dropout rate equals 100 percent less than the projected grade holding power, for which the formula was given a few paragraphs back.

Dropouts per 1,000 pupils in ADM (annual). The number of dropouts per 1,000 pupils in average daily membership is the number of pupils dropping out since the completion of the preceding regular school term, multiplied by 1,000 and divided by the average daily membership of pupils during this term:

$$\text{Dropouts per 1,000 pupils in } ADM \text{ (annual)} = \frac{D}{ADM} \times 1{,}000$$

Cumulative dropouts per 1,000 pupils in ADM. The cumulative dropouts per 1,000 pupils in the average daily membership of pupils entering a given grade during a given regular school term is the total number of pupils dropping out of this grade group since the completion of the preceding regular school term, times the number of regular school terms included, times 1,000, and divided by the sum of the ADM of the terms included. For example, the cumulative dropouts per 1,000 pupils in *ADM* in a group of pupils passing through grades 10–12 during 1961–63 is computed as follows:

A DROPOUT is a pupil who leaves a school, for any reason except death, before graduation or completion of a program of studies and without transferring to another school. The term "dropout" is used most often to designate those elementary and secondary school pupils who have been in membership during the regular school term and who withdraw from membership before graduating from secondary school (grade 12) or before completing equivalent programs of studies. Such an individual is considered a dropout whether his dropping out occurs during or between regular school terms, whether his dropping out occurs before or after he has passed the compulsory school attendance age, and, where applicable, whether or not he has completed a minimum required amount of school work.—*The definition agreed upon by the Cooperative Project on Pupil Accounting for Local and State School Systems.*

$$\text{Cumulative dropouts per 1,000 pupils in } ADM_{\substack{10\text{-}12\\1961\text{-}63}} = \frac{\left(D_{\substack{10\\1961}} + D_{\substack{11\\1962}} + D_{\substack{12\\1963}}\right) \times 3 \times 1{,}000}{ADM_{\substack{10\\1961}} + ADM_{\substack{11\\1962}} + ADM_{\substack{12\\1963}}}$$

Because the formula is based on the average of the *ADM*'s, it can also be expressed in this way:

$$= \frac{\left(D_{\substack{10\\1961}} + D_{\substack{11\\1962}} + D_{\substack{12\\1963}}\right) \times 1{,}000}{\left(ADM_{\substack{10\\1961}} + ADM_{\substack{11\\1962}} + ADM_{\substack{12\\1963}}\right) \div 3}$$

Number and percentage of pupils dropping out, by reason. An analysis of reasons for dropping out may be obtained by considering, first, the number of pupils dropping out who are included in each of the categories of reasons for dropping out and, second, the percentage of dropouts included in each category. For instance—

$$\text{Percentage of pupils dropping out because of physical illness (D1)} = \frac{\text{Number dropping out because of physical illness}}{\text{Total number of dropouts}} \times 100$$

The percentage of pupils dropping out for each of the other categories of reasons may be calculated in the same way (see the list on page 15).

Number and percentage of pupils dropping out, by residence after dropping out. An analysis of the residence of pupils after dropping out may be made by considering, first, the number of pupils dropping out who

TERMS AND DEFINITIONS

Many of the terms Dr. Putnam uses in his computations—original entry, reentry, transfer, and so forth—have been defined in a nationwide project that recently completed the work of selecting, organizing, and defining the items of information basic to a system of collecting and analyzing data about pupils. The items here are only a few of these; they are presented because of their pertinence to information about dropouts. The definitions will eventually be published in full as part of a handbook of items of information for use in pupil accounting; here they are slightly abridged.

ENTRY

Original Entry

An original entry is a pupil who enters an elementary or secondary school for the first time during a given regular school term in a given State or possession of the United States. There are two kinds of original entry:

E1. Original entry for the United States. A pupil who for the first time in the United States or its possessions enters either a public or nonpublic elementary or secondary school for the regular school term for which the report is made.

E2. Original entry transferred from another State or possession. An entering pupil who, during the regular school term for which the report is made, has previously entered either a public or nonpublic elementary or secondary school in another State or possession but has not previously during the term entered a school in this State.

Reentry

R1. A pupil received from another room within the same elementary or secondary school.

R2. A pupil received from a public school in the same local administrative unit which he entered earlier in the current regular school term.

R3. A pupil received from a nonpublic school located in the same local administrative unit which he entered earlier in the current regular school term.

R4. A pupil received from a public school in the State or possession, but outside the local administrative unit, which he entered earlier in the current regular school term.

R5. A pupil received from a nonpublic school in the State or possession, but located outside the local administrative unit, which he entered earlier in the current regular school term.

R6. A pupil returning to the same room in the same school after withdrawal or discharge from this room earlier in the current regular school term, who has not entered any other school during the intervening period.

are included in each of the categories of residence after dropping out and, second, the percentage of dropouts included in each of the categories.

$$\text{Percentage of dropouts remaining at same residence after dropping out} = \frac{\text{Number of dropouts remaining at same residence}}{\text{Total number of dropouts}} \times 100$$

A similar computation can be made for each of the other categories of residence after dropping out (see the list on page 15).

Number and percentage of pupils dropping out who have complied with laws and regulations for compulsory school attendance. School authorities should determine whether the dropouts have complied with the laws and regulations for compulsory school attendance. Within a given State such determination might concern factors such as the pupil's age, his educational progress, the distance between his residence and the school or the school bus route, the economic needs of his family, and his employment status. For those pupils who drop out of school, an analysis of their compliance with prevailing laws and regulations may be obtained by considering, first, the number dropping out who comply with each of the laws and regulations and, second, the percentage of dropouts who comply. For instance:

$$\text{Percentage of dropouts who had passed the age of compulsory school attendance at time of dropping out} = \frac{\text{Number of dropouts past the age of compulsory school attendance}}{\text{Total number of dropouts}} \times 100$$

A similar computation can be made for each of the laws and regulations pertaining to compulsory school attendance within a given State.

Number and percentage of pupils dropping out, by characteristics of pupils. An analysis of the characteristics of pupils who drop out may be obtained by considering, first, the number of pupils who have certain characteristics, singly or in combination, and, second, the percentage of dropouts having these characteristics or combinations of characteristics.

R7. A pupil received directly from a school in another State, possession, or country who previously entered a school in this State or possession during the current regular school term.

WITHDRAWAL

Transfer

T1. Transfer within the same school.

T2. Transfer to a public school or other instruction under public school supervision in the same local administrative unit.

T3. Transfer to a nonpublic school located within the same administrative unit.

T4. Transfer to a school outside the local administrative unit.

Completion of school work

C1. Graduation from high school (grade 12) or community college.

C2. Completion of terminal program.

C3. Completion of schoolwork in an approved manner other than *C1* and *C2*.

Dropout

A pupil drops out when he leaves school, for any reason except death, before he graduates or completes a program and does not transfer to another school.

Death

REASON FOR DROPPING OUT

The *one most significant reason* should be indicated for each pupil dropping out of school, though a school, if it wishes, may maintain separately a record of additional reasons.

D1. Physical illness.

D2. Physical disability—an impairment or handicap of a permanent or semipermanent nature.

D3. Mental illness.

D4. Behavioral difficulty.

D5. Mental disability—a deficiency or handicap of a permanent or semipermanent nature.

D6. Academic difficulty.

D7. Lack of appropriate curriculum.

D8. Lack of interest in school work.

D9. Parental influence.

D10. Need at home.

D11. Economic reasons.

D12. Employment.

D13. Marriage.

D14. Pregnancy.

D15. Other known reason. Reason should be specified—for example, no school available, or excessive distance from home to school or school bus route.

D16. Unknown reason.

D17. Move to another residence; school status unknown.

RESIDENCE AFTER DROPPING OUT

Same residence.

New residence of family.

Noneducational institution.

Armed services.

Other new residence.

No record of residence.

$$\text{Percentage of dropouts who were age 18 at the time of dropping out} = \frac{\text{Number of pupils dropping out at age 18}}{\text{Total number of dropouts}} \times 100$$

Such an analysis can be made of any of a number of personal characteristics of pupils, such as age and sex; of specific activities in which these pupils participated; and of pupil performance, such as programs selected, highest grades completed, specific courses completed, average of marks for all courses or specific marks in given courses, scores on given standardized tests (for example, mental-maturity tests and reading achievement tests), number of times retained or not promoted, and number of absences. An analysis can also be made of information about parents, such as information about their education and occupation; information about residence status of pupils and the number of times the pupils previously transferred to new schools; and information about what States, counties, school systems, or schools the pupils came from.

In each of the last four computations it may be desirable, for purposes of analysis, to compare one factor with other factors. For example, the number of pupils dropping out of school for a given reason may be compared with the percentage of pupils dropping out for this reason, the number of different pupils in the school or school system, and the number of different pupils in a given grade group.

SOUND INFORMATION about pupils who drop out of school may enable educators and other leaders to gain a better insight than they have had hitherto into the nature of the dropout situation, whether they consider it from the standpoint of an individual school, or school system, a city, a State, or the Nation. It may help them to find out what characteristics of children predispose them to dropping out. It may help them to perceive and accept those predisposing characteristics that cannot be changed. It may provide a basis for the modification of characteristics that can be changed. And it may provide a basis for the modification of the physical environment and human relationships in school and community which, if left unchanged, may cause a pupil—or a whole group of pupils—to drop out.

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